



(43) International Publication Date
7 April 2005 (07.04.2005)

PCT

(10) International Publication Number
WO 2005/031901 A2

- (51) **International Patent Classification⁷:** **H01M 8/00**

(21) **International Application Number:**
PCT/JP2004/011803

(22) **International Filing Date:** 11 August 2004 (11.08.2004)

(25) **Filing Language:** English

(26) **Publication Language:** English

(30) **Priority Data:**
2003-333656 25 September 2003 (25.09.2003) JP

(71) **Applicant (for all designated States except US):** NISSAN MOTOR CO., LTD. [JP/JP]; 2, Takara-cho, Kanagawa-ku, Yokohama-shi, Kanagawa 2210023 (JP).

(72) **Inventor; and**

(75) **Inventor/Applicant (for US only):** FUKUDA, Takashi [JP/JP].

(74) **Agents:** MIYOSHI, Hidekazu et al.; Toranomom Kotohira Tower, 2-8, Toranomom 1-chome, Minato-ku, Tokyo 105-0001 (JP).

(81) **Designated States (unless otherwise indicated, for every kind of national protection available):** AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) **Designated States (unless otherwise indicated, for every kind of regional protection available):** ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— without international search report and to be republished upon receipt of that report

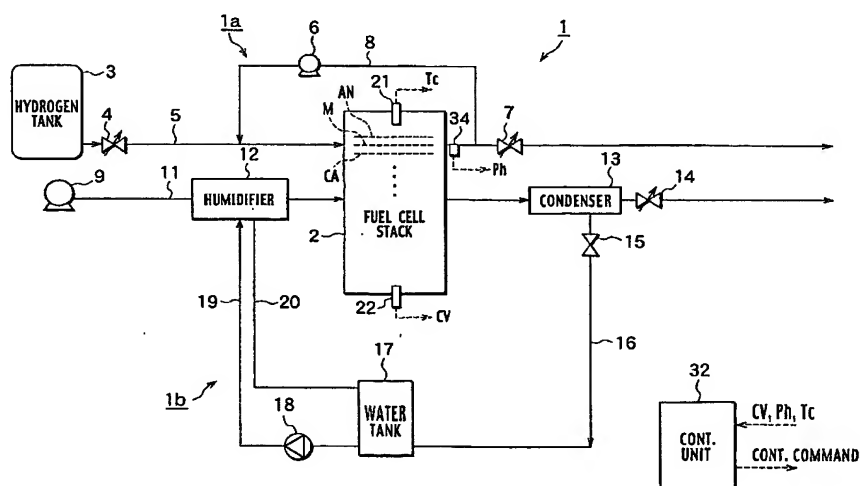
For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

— *without international search report and to be republished upon receipt of that report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: FUEL CELL SYSTEM



(57) Abstract: A fuel cell system (1) which includes: a fuel cell (2) to be supplied with a gas for power generation, the gas unused for the power generation to be discharged out of the fuel cell (2); a circulation flow path (8) through which the discharged gas is resupplied to the fuel cell (2); a variable flow rate circulation pump (6) for circulating the gas through the circulation flow path (8); a valve (7) for discharging the gas in the circulation flow path (8) to the outside thereof; a voltage sensor (22) for measuring voltage of the fuel cell (2); and a controller (32) for controlling the circulation pump (6) and the valve (7). The circulation pump (6) and the valve (7) are controlled based on the voltage (CV) measured by the voltage sensor (22).